

Education, Industry News

National Carbon Co.'s multimillion dollar laboratory at Parma, Ohio, dedicated September 18, 1956, is designed primarily for basic research in chemical and solid-state physics. The company is a division of Union Carbide and Carbon Corp. which, in 1955, spent approximately \$43 million on research.

The buildings are located near the center of a 126-acre plot and contain 175,000 sq ft of floor space. Designed for extreme flexibility, with provisions for expansion, the main laboratory building consists of 158 laboratory modules, or individual research units, fully equipped with

all the usual service lines plus unusual features necessitated by the type of research, such as lines distributing rare gases. Supplementing the laboratory facilities are adjacent wings housing the chemical engineering and laboratory furnace areas, machine shop, dispensary, a library with a 12,500-volume capacity, cafeteria, locker and shower rooms, boiler and compressor rooms, and administrative, clerical and business offices.

An auditorium is designed to double as a laboratory and projection room for research on light sources for the motion-picture industry. The auditorium is long and narrow, so that light may be projected 100 ft onto a large screen. This arrangement makes it possible to achieve the general

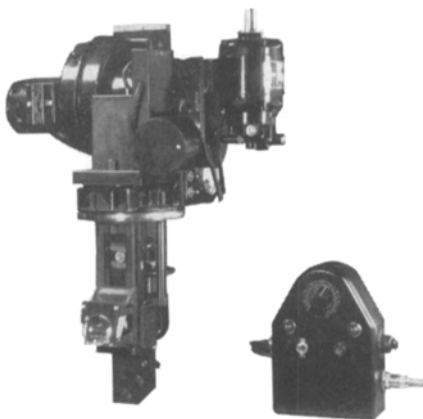
sort of projector conditions found in neighborhood-type theaters and to conduct studies of Cinerama-type wide screens.

The auditorium's projection booth includes three openings for projectors, one for 16mm film, one for 35mm film and a spotlight-arc unit for slides. In the booth are two outlets, 500 amp circuits, to supply power for standard and experimental arcs, buttons to raise or lower the screen by automatic remote control, and a control panel for a rack of photocells to measure brightness distribution over the surface of the screen. A door of the booth opens directly to a large laboratory for basic research on carbon arcs. One of the most important problems under study involves two special instruments, a recording spectro-

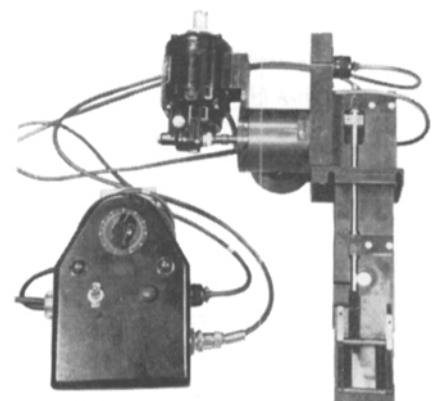


AUTOMATIC FADE UNIT

- Engineered to insert into the lamp-house in place of filter holder.
- A filter pack holder is installed in Fade Unit and is removable.
- Fade lengths are variable and can be changed while printer is in operation.
- Pilot lights indicating open or closed position.
- Furnished with Micro-switch breaker box, and necessary rollers.
- Simple installation, no machining necessary.



Fade Unit shown inserted in lamphouse.



Fade Unit complete with control panel.

AUTOMATIC FADE UNIT NOW AVAILABLE

- **MODEL "JA" & "DA" PRINTERS** equipped with 300 watt, super high intensity lamphouse.
- **MODEL "J" & "D" PRINTERS** with standard 300 watt lamphouse.

Send for Catalog
of Motion Picture
Printing Equipment
and Accessories.



MOTION PICTURE PRINTING EQUIPMENT CO.
Mfrs. of Optical and Continuous Printers and Accessories
8107 NORTH RIDGEWAY AVENUE • SKOKIE, ILLINOIS

Write today
for prices
and complete
literature.

radiometer and a recording spectrometer (illustrated above).

The boiler and compressor room is on the ground floor and occupies a space 84 by 88 ft, with a ceiling height of 30 ft running up through the first floor. Major equipment consists of two natural-gas-fired boilers, with liquid Pyrofax standby, and two 400-ton refrigeration units. These units, together with six others in various areas, provide 1,000 tons of refrigeration. Chilled water from the refrigeration units is pumped through heat exchange coils in a number of air supply units located in various pent-houses on the roof of the laboratories. From those supplying the laboratory areas, 750 cu ft/min of electronic filtered air at 58 F is delivered to each one of the 158, 12 x 24 ft modules. This air is warmed as needed by a thermostat-controlled reheat coil in each module and is then exhausted to the outdoors without any recirculation.

This makes it possible to use toxic chemicals in any module and the air is then exhausted through a hood rather than a ceiling fixture. Other air-conditioning systems in the laboratories are used for specific purposes, such as one that supplies the modules where electrical brush testing is conducted.

The Biological Photographic Association held its 26th Annual Meeting August 27-31 in the Powers Hotel, Rochester, N.Y. The first session was a Color Symposium. Among the papers presented were: Fundamental Factors Affecting Color Films by Howard C. Colton, Color Products Information Section, Eastman Kodak Co.; Adjustment of Color Temperature of the Illumination for Photomicrography With Color Films by Roger P. Loveland, Kodak Research Laboratories; Using Combinations of Color Compensating Filters, Charles G. Brownell, Medical Sales Div., Eastman Kodak Co.; Ansochrome, Its Photographic and Processing Characteristics by James E. Bates, Processing Development Laboratory, Anso; Comparison in Quality and Cost of 35mm, 2 1/4 by 3 in., 4 by 5 in., and 5 by 7 in. Photomicrography in Color by Jack Fason, Medical Illustration Service, Veterans Administration, Denver; Color Filters with Multi-Layer Coatings by Harold H. Schroeder, Scientific Bureau, Bausch & Lomb Optical Co.

Dr. Alfred N. Goldsmith has been appointed consultant for *Electronic News*, a weekly industrial newspaper that Fairchild Publications, Inc., plans to publish, beginning early in 1957. Dr. Goldsmith has been editor or editor emeritus of the *Proceedings of the IRE* since 1912 except during 1929 when he served as president of the Institute of Radio Engineers. He was elected SMPTE President in 1932 and has served as chairman of various sectional committees of the American Standards Association.

John S. Boyers has been appointed Manager of Engineering for Bell Sound Systems, Inc., Columbus, Ohio. He is a member of this Society and also a member of the Institute of Radio Engineers and of the Acoustic Society of America. Before his present appointment he was Chief Engineer for Magnetic Memory and Audio Devices, National Co., Inc., Malden, Mass.

NO MORE



OF THESE!

with the Miracle "BUTT-WELD"

PRESTO-SPLICER

"The finest film splicer, the World over".

Splices all types and sizes of film including CRONAR* (Polyester Photographic), negative, print or optical—a film-fusion (butt-weld) end-to-end.

DOUBLE CHECK THESE BIG FEATURES:

- No scraping
- No cement
- No overlap
- No lost picture
- Automatically pre-plasticized, no drying out of splice

... all in 2 3/4 seconds!

Time tested over 8 years, PRESTO-SEAL is guaranteed to give perfect frame splicing on 35 or 16 mm film, with single thickness.

- Eliminates the need of AB printing
- magnetic track spliced without fall-outs
- no clicks going through projector
- no edge oozing

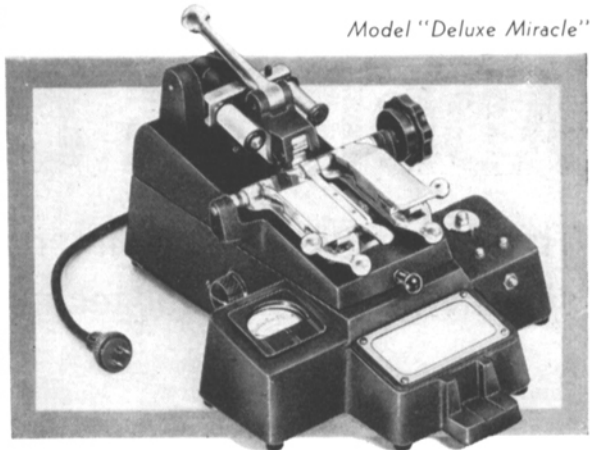
Sample and Brochure on Request

Unaffected by humidity, same machine functions for both regular or polyester base photographic film without changeover.

- Thermal Heating
- No arc-over hazard
- No FCC difficulties
- No field service problem
- Dark room splicing, a breeze!
- Not dialectic
- No shock hazard

The ONLY "BUTT-WELD" splicer that satisfactorily splices CRONAR film. * REG. U. S. PAT. OFF.

PRESTOSEAL MFG. CORP.
3727 33rd st., Long Island City 1, N.Y.



Tripod Perfection!

IMPROVED PROFESSIONAL JUNIOR TRIPOD*

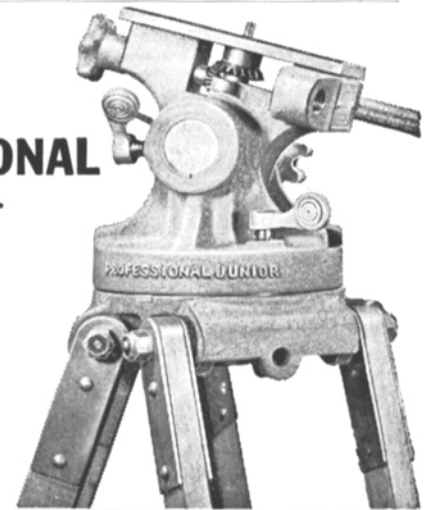
ALWAYS A GREAT TRIPOD, the new improved PROFESSIONAL JUNIOR with the removable head, now features the following improvements:

1. Simplified camera attaching method with easily accessible knob—no fumbling under camera platform.
2. Adjustable telescoping pan handle—make it longer or shorter to suit you needs.
3. Additional pan handle sockets for left, right or reverse tilt.
4. Larger gripping area and sturdier construction of tilt and pan locking levers.
5. New tie-down eyelets in flange.

And most surprising, there is NO INCREASE IN PRICE. See, test, try PRO JR.—you'll never want to be without it.

*Patented

JUDSON 6-1420



SALES • SERVICE • RENTALS

- 16 & 35 mm Motion Picture Cameras. *PHOTO RESEARCH Color Temperature Meters. *Moviola.
- *Neumade and Hollywood Film Company cutting room equipment.
- *Hot Splicers. *DOLLIES — Mole Richardson and Colortran Lighting Equipment.
- Complete line of 16mm and 35mm Cameras

SPICES NOT HOLDING?

Try Jefrona all-purpose cement. Send for FREE sample.

FRANK C. ZUCKER
CAMERA EQUIPMENT CO.
315 West 43rd Street, New York 36, N. Y.

Announcing THE NEW BELL & HOWELL ADDITIVE COLOR PRINTER!

This totally new color printer offers seven advanced features . . . sets new standards for technical precision and operating convenience.

The Bell & Howell Additive Color Printer is the result of intensive research and close collaboration with film laboratory specialists throughout the world. In addition to the features shown here, it incorporates the latest innovations of Bell & Howell's Continuous Film Printers which today print nearly all of the world's commercial film.

1. Controlled Color Density—Available light is separated into the three primary colors: red, green and blue. A system of dichroics is used to produce only pure, narrow color beams. Color intensity is controlled by adjustable vanes which act as light modulators, permitting more or less of each color to pass. The three modified color beams are recombined at the aperture to produce the density and color required for correct printing.

2. Increased Illumination—Equipped with 1,000 watt, high-intensity, pre-aligned printing lamp. An electrical interlock prevents the lamp from burning unless blower is in operation. Illumination can be reduced for black and white printing.

3. Variable Speeds—60, 90 and 120 feet per minute.

4. Integral Fader—Built into the lamphouse. Adjustable to produce the desired fade length. Fade

lengths of 20, 36 and 48 frames are available on 16mm printers, and 16, 32 and 48 frames on 35mm printers. Fade adjustments may be changed during the printing run to produce any of the three lengths.

5. Visual Circuit Inspection—Five pilot lights (with doublers) are mounted on each of the three color banks to permit visual inspection of the electrical circuitry for ease of maintenance. Electronic components are replaced as units, virtually eliminating lost production due to maintenance down time.

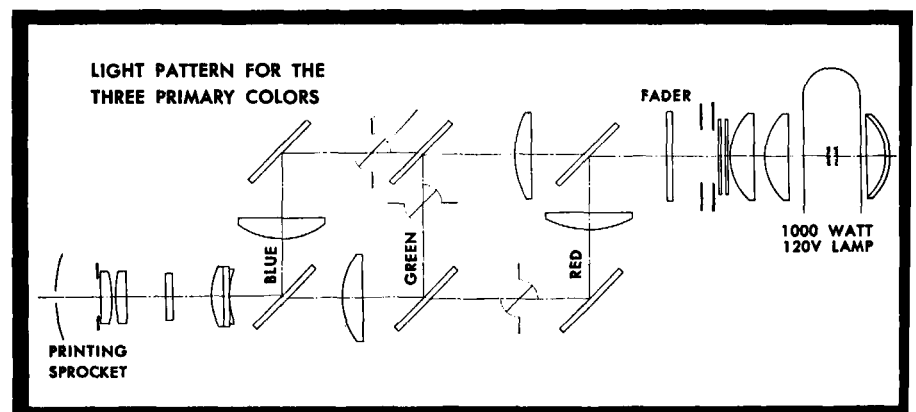
6. Automatic Operation—Color and illumination cue controls are actuated by a perforated control tape which is pre-punched on the program perforator. The tape passes through a reader built into the console base of the printer and controls all necessary printing functions with the exception of the fade.

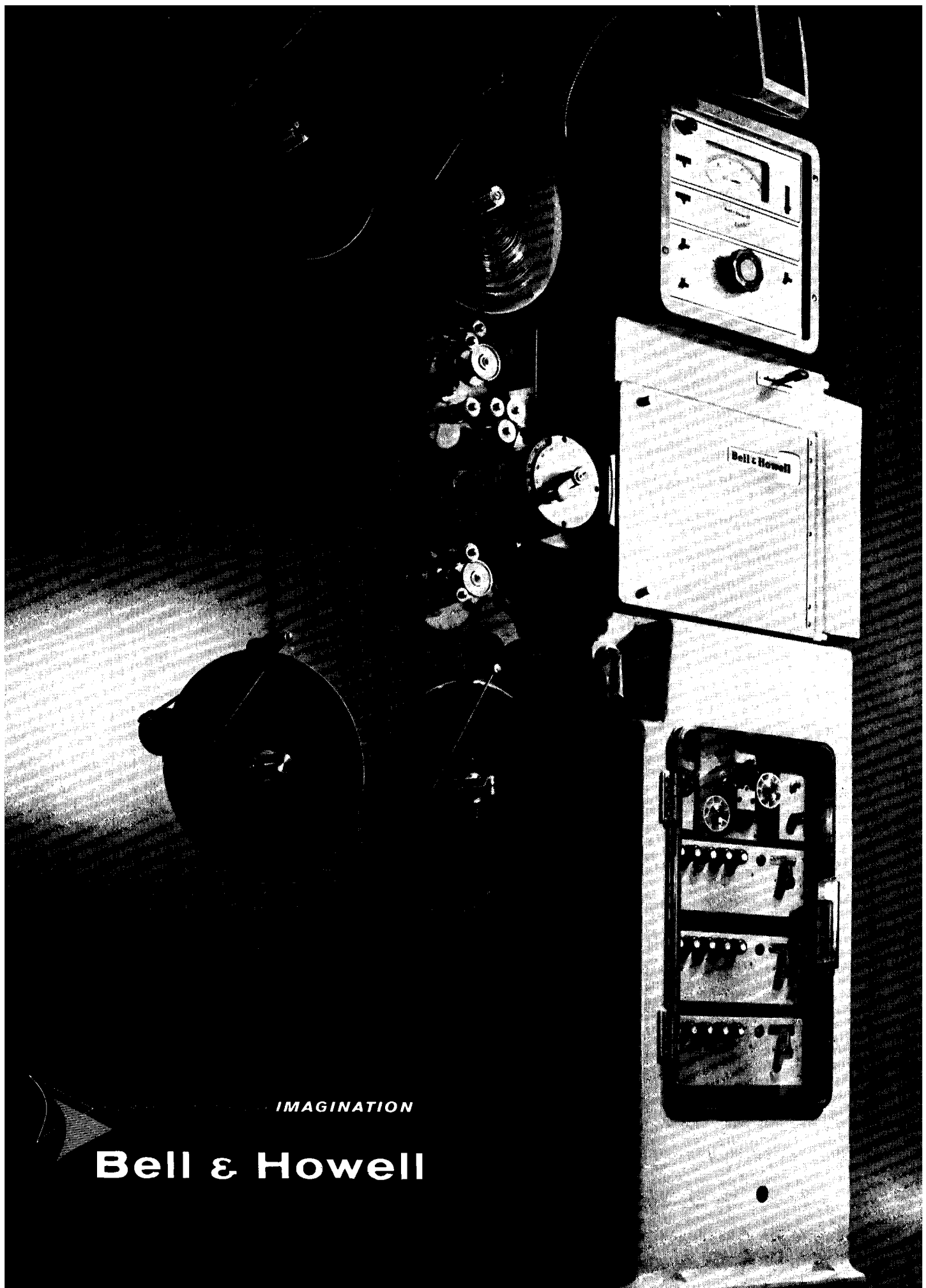
7. Easily Accessible Controls—Mounted on a panel above the printer lamphouse. The *film footage counter* registers up to 10,000 feet of film and can be reset at the start of each film run. The *automatic fader counter* permits the operator to keep count of fades if they are to be varied in length during printing. Both counters are illuminated for easy viewing.

AVAILABLE ACCESSORIES

- Program perforator for producing control tape
- 1000 watt rectifier for DC
- Margin printing kit for light printing edge numbers (16mm)
- Sensitized patch cueing kit to eliminate notching

For further information, write Bell & Howell, Professional Equipment Division, 7185 McCormick Road, Chicago 45, Illinois.





IMAGINATION

Bell & Howell